ARK-3405

Intel® Celeron™ N3160 Fanless Embedded Box PC with Rich Expansion and Dual Removable 2.5" HDD Drive Bays
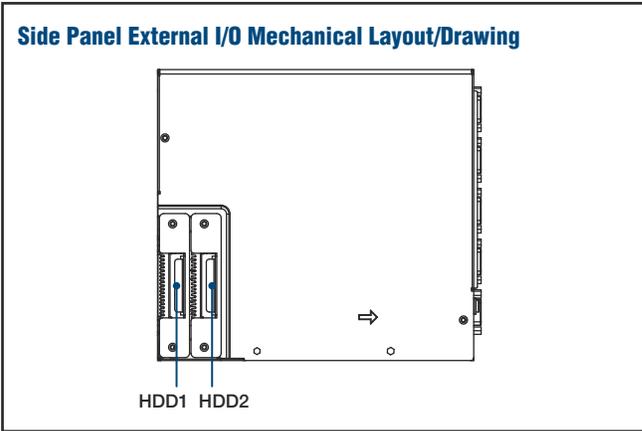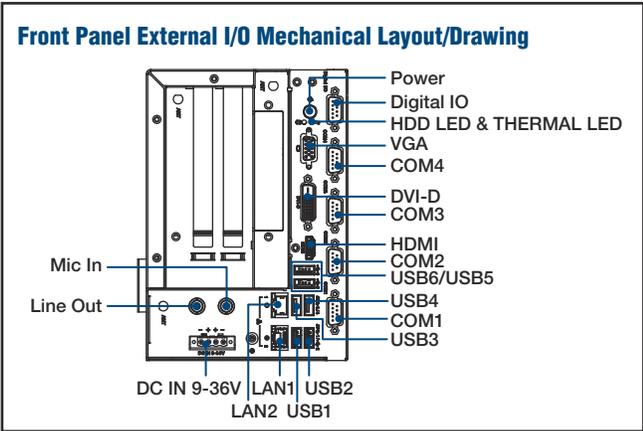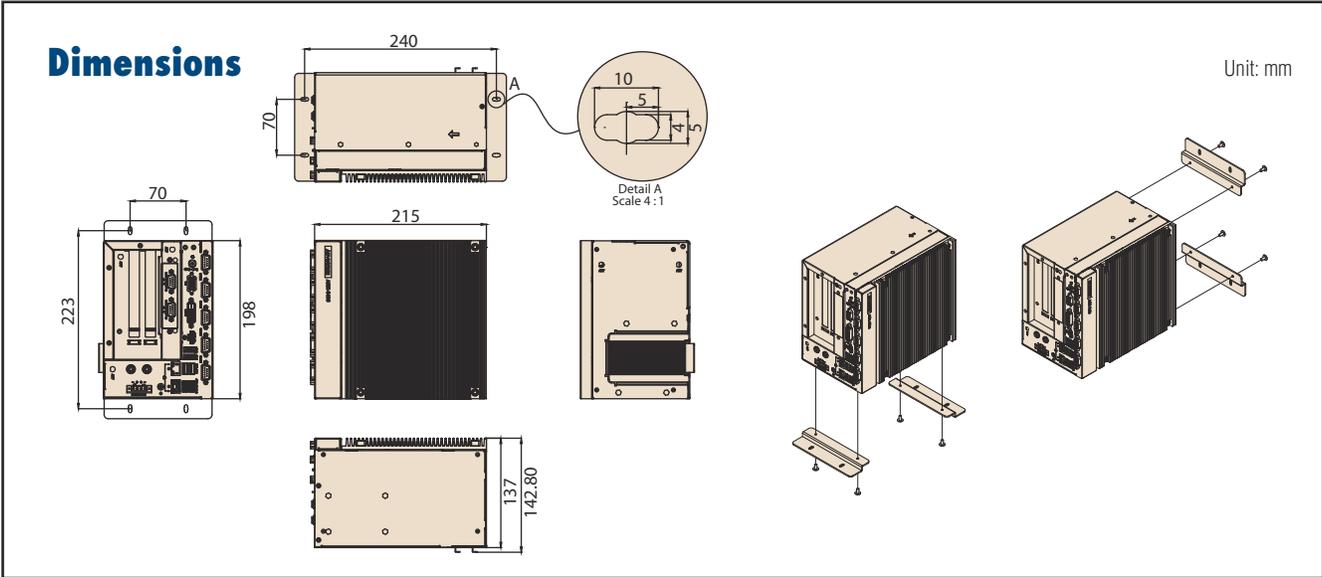
NEW

Features

- Intel® Celeron™ N3160 Quad Core 2.24GHz SoC with Turbo boost Support
- Supports VGA /DVI-D/HDMI triple independent display
- Support 2 GbE, 3 USB 3.0, 3 USB 2.0, 1 DIO, audio and 4 COM ports
- Two removable 2.5" SATA HDD drive bays
- Flexible Expansion via PCI/PCIe x1
- Support 2 Mini PCIe with 1 SIM holder for communication module
- Wide range power input 9-36V
- Advantech iDoor module compatible

Windows Embedded   WISE-PaaS/RMM   CCC   LISTED c UL us E180881   CE   FCC   RoHS COMPLIANT 2002/95/EC

Specifications

Processor System	CPU	Intel Celeron N3160 processor
	Max. speed	1.6GHz, Turbo boost up to 2.24GHz
	BIOS	AMI EFI 64 Mbit BIOS
Memory	Technology	DDR3L 1600MHz
	Max. Capacity	8 GB
	Socket	1 x 204-pin SO-DIMM
Graphics	Chipset	Intel HD 8 Gen Integrated Graphic Engine
	Interface	VGA: Up to 1920 x 1200 @ 60Hz DVI-D: 1920 x 1200 @ 60Hz HDMI: 2560 x 1600 @ 60Hz; 3840 x 2160 @ 30Hz
	Triple Display	VGA + DVI-D + HDMI
Ethernet	LAN 1	10/100/1000 Mbps Intel i210 Ethernet controller, support Wake on LAN
	LAN 2	10/100/1000 Mbps Intel i210 Ethernet controller, support Wake on LAN
Audio	Interface	Realtek ALC892; Mic-in and Line-Out
IO interface	Serial Interface	2 x RS-232, 2 x RS-232/422/485 w/ auto flow control (Default) ; COM 4 support 5V/12V power supply (by jumper) Additional 2 x RS-232 ports support by cable and bracket (Optional by project support)
	USB Interface	3 x USB 2.0 + 3 x USB 3.0, 1 x internal USB2.0
	Digital I/O	8-bit digital IO
	P/S2	1 x PS/2 port support by cable and bracket (Optional by project support)
Other	Watchdog Timer	255-level timer interval, setup by software
	TPM	TPM 2.0 (Optional by project support)
Expansion	Add-on Card Slot	2 Slots PCI (default) 1 Slot PCI and 1 Slot PCIe x1 (Optional: AMO-R020E); 2 Slots PCIe x1 (Optional :AMO-R019E); Maximum card size of 180mm (L) x 110mm (H) Maximum power consumption 10w for each slot
	Mini PCIe	2 x Full-size Mini PCIe (1 Mini PCIe with SIM holder)
Storage	HDD/SSD	Two 2.5" SATA removable HDD Bays with maximum device height 12.5mm
	SD	1 internal SD Card slot support
Software Support	Microsoft Windows	Windows 10, Windows 8.1, Windows 7, WES8.1 , WES7
	Linux	Support by project
Power Requirement	Power Type	AT/ATX
	Power Input Voltage	9 V_{DC} ~ 36 V_{DC}
	Power Adapter	AC to DC, DC12V/7A, 84W (Optional)
Power Consumption	Typical	9.7W
	Max.	22.8W
Mechanical	Construction	Aluminum housing
	Mounting	Desk/wall-mounting
	Dimensions (W x H x D)	142.8 x 198 x 215 mm (5.63" x 7.79" x 8.46")
	Weight	3.16 kg (6.97 lb)
Environment	Operating Temperature	With extended temperature peripherals: -10 ~ 55 °C (-14 ~ 131 °F) with 0.7m/s air flow With 2.5-inch hard disk 0 ~ 40 °C (32 ~ 104 °F) with 0.7m/s air flow
	Storage Temperature	-40 ~ 85° C (-40 ~ 185°F)
	Relative Humidity	95% @ 40° C (non-condensing)
	Vibration Loading During Operation	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis
	Shock During Operation	With SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration
	EMC	CE/FCC Class A, CCC, BSMI
	Safety Certifications	CB, UL, CCC, BSMI

ADVANTECH | **Embedded Box PCs**

Dimensions

Unit: mm

Front Panel External I/O Mechanical Layout/Drawing

- Power
- Digital IO
- HDD LED & THERMAL LED
- VGA
- COM4
- DVI-D
- COM3
- HDMI
- COM2
- USB6/USB5
- USB4
- COM1
- USB3

Mic In
Line Out

DC IN 9-36V LAN1 USB2
LAN2 USB1

Side Panel External I/O Mechanical Layout/Drawing

HDD1 HDD2

Ordering Information

Part No.	CPU	DDR3L	VGA	DVI-D	HDMI	RS-232	RS-232/ 422/485	DIO	USB 3.0	USB 2.0	MiniPCIe	SIM	Expansion	iDoor
ARK-3405R-S6A1E	N3160	up to 8GB	1	1	1	2	2	8-bit	3	3	2	1	2 x PCI	1

Packing List

Part Number	Description
-	1 x China RoHS for ARK-3405
-	1 x User Manual (Simplified Chinese)
2190000902	1 x CARDBOARD-WARRANTY
1652003234	1 x 4-pin PLUG-IN BLOCK
1990021361N000	2 x HDD Thermal-Pad
1960069484N000	2 x LAN Clip Bracket
1960073853N001	2 x Mounting Bracket
1990027474N000	1 x CPU Thermal-Pad
9680015173	1 x L type Wrench for top cover

Option Item Information

Part Number	Description
AMO-R019E	2x PCIex1 riser card
AMO-R020E	1x PCI + 1x PCIex1 riser card
96PSA-A84W12P4	AC to DC Adaptor, DC12V/7A, 84W, 0 ~ 40° C
1702002600	Power Cord, 3-Pin 183cm, USA type
1702002605	Power Cord, 3-Pin 183cm, EU type
1702031801	Power Cord, 3-Pin 183cm, UK type
1700000237	Power Cord, 3-Pin 183cm, PSE type

Embedded OS

Part Number	Description
2070014220	WES7E 64bit ENG/CHT/CHS/JPN
2070014248	WES8.1E 64bit ENG/CHT/CHS/JPN
2070014270	Win 10 Enterprise 64bit with EN/JP/TC/SC

Optional MOS modules for iDoor Expansion

Part Number	Description
MOS-1120Y-0201E	Isolated RS-232, 2-Ch, DB9, PCIe I/F
MOS-1121Y-0201E	Isolated RS-422/485, 2-Ch, DB9, PCIe I/F
MOS-1120Y-1401E	Non-Isolated RS-232, 4-Ch, DB9, PCIe I/F
MOS-1121Y-1401E	Non-Isolated RS-422/485, 4-Ch, DB9, PCIe I/F
MOS-2120-Z1101E	Giga LAN Ethernet module, 1-Ch, PCIe I/F
MOS-2220-Z1101E	High Speed Serial COM module, 1-Ch, USB I/F
MOS-2220-X1101E	Parallel LPT module, 1-Ch, USB I/F
MOS-2230-Z1201E	CANBus module, 2-Ch, USB I/F
MOS-1130Y-0201E	Isolated CANBus, 2-Ch, DB9, PCIe I/F
MOS-1110Y-0101E	Isolated 16 DI/8 DO, 1-Ch, DB37, PCIe I/F
MOS-2110Z-1201E	USB module, 2-Ch, PCIe I/F